Ø 001/010

MAY 2 5 2006

PTO/SB/21 (09-04) Approved for use Inrough 07/31/2005. OMB 0851-0031 U.S. Palent and Tradamark Office; J.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persona are required to respond to a collection of information unless it displays a valid OMB control number. Application Number 10/699,491 TRANSMITTAL Filing Date October 31, 2003 First Named Inventor FORM Yulchi likubo et al. Art Unit **Examiner Name** Unknown (to be used for all correspondence after initial filing) Attorney Docket Number PC3-059 Total Number of Pages in This Submission ENCLOSURES (Check all that apply) After Allowance Communication to TC Fee Transmittal Form Drawing(s) Apper I Communication to Board Licensing-related Papers Fee Attached of Apr eals and Interferences Apper I Communication to TC Petition Amendment/Regiv (Appe: I Notice, Brief, Reply Brief) Pelition to Convert to a After Final Propriatary Information Provisional Application Power of Attorney, Revocation Status Letter Affidavits/declaration(s) Change of Correspondence Address Other Enclosure(s) (please Identify Terminal Disclaimer Extension of Time Request below: Form PTO-1449 Request for Refund Express Abandonment Request Supplemental CD, Number of CD(s) Information Disclosure Statement Landscape Table on CD Certified Copy of Priority Remarks Ducument(s) Customer No. 021567 SECOND TRANSMISSION Reply to Missing Parts/ MAY 25, 2006 Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Name Wells Su Join P.S. Signature Printed name Robert Č. Hyta Date Reg. No. CERTIFICATE OF TRANSMISSION/MAILING I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, / Jexandria, VA 22313-1450 on the date shown below:

Sent by facsimile to: (571) 273-8300 Signature

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including aphering, and submitting the completed application form to the USPTO. Time will vary depending upon the in lividual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Palant and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date

May <u>24</u>, 2008

If you need assistance in completing the form, call 1-800-PTO-9199 and select opt on 2.

Muriel G. Dunntgan

Typed or printed name

MAY 2 5 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No	10/699,491
Filing Date	
Inventor	
Assignee	
Group Art Unit	
Examiner	
Attorney's Docket No	PC3-059
Title Processes for Purifying Reaction Products	
Chlorofluorinated Compounds	, 3

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

The attached Form PTO-1449 is submitted in compliance with 37 C.F.R. §§ 1.56, 1.97 and 1.98. Pursuant to Federal Register Vol. 69, No. 182, pg. 56542 (September 21, 2004) no copies on any cited U.S. patents or U.S. published application are included herewith. No admission is made regarding whether all the submitted references are prior art.

The listed references were cited by, or submitted to, the Office in the parent, co-pending application of the above-identified application. The above-identified application is a continuation or divisional application of co-pending application Serial No. 09/966,158, filed September 28, 2001. Such prior disclosure is sufficient for the above-identified application as far as copies of the references are concerned. 37 C.F.R. § 1,98(d) and MPEP § 609(2).

This Supplemental Information Disclosure Statement is being filed before receipt of the first Office Action. Therefore, no fee is believed to be required. However, in the event that a fee is required please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

Citation of these references is respectfully requested.

Respectfully subm tted,

Dated: 5/24/00

By:

Reg. No. 46,791

05/25/2006 08:52 FAX 5098383424

WELLS ST JOHN PS

MAY 25 2006

2004/010

Sheet 1 of 7

Form PTO-1449 ATTY, DOCKET NO. U.S. DEPARTMENT OF COMMERCE SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT (Use several sheets If necessary) APPLICANT: Yuichi I kubo, et al FILING DATE **GROUP** October 31, 2003 1621 U.S. PATENT DOCUMENTS Examiner's Document Number Date Name Class Subclass Filing Date If Appropriate AA 1.132,636 03/1915 Taylor, et al 1,926.395 09/1933 T. Midgley, Jr. AC 1,926.396 09/1933 Midgley, Jr. 2,021,981 11/1935 Bichowsky Æ 2.413,696 01/1947 Downing, et al 2,456,028 12/1948 Simons ΑЗ 2,519,983 **OB/1950** Simons 3,080,430 03/1963 Cohen A 3.479,286 11/1969 Gambaretto, et al N 3,656,553 04/1972 Rainaldi, et al ΑK 3,715,438 02/1973 Huggett ΛL 3,822,207 07/1974 Howard, et al AM. 3,844,354 10/1974 Larsen AN 4,014,799 03/1977 Owens AO 4,225,404 09/1980 Dietrich, et al 4.226.728 10/1980 Kung ACI 4.446,923 05/1984 Martin 4,459,213 04/1972 Uchida, et al A5 4,536,298 08/1985 Kamei, et al. 4,668,407 05/1987 Gerard, et al AU 4,810,403 03/1989 Bivens, et al 4,826,610 05/1989 Thacker EXAMINER DATE CONSIDERED *EXAMINER: Imitial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

Ø 005/010 Sheet 2 of 7

MAY 25 2006

Form PTQ-1449 ATTY, DOCKET NO. SERIAL NO. U.S. DEPARTMENT OF COMMERCE PC3-059 10/699,491 PATENT AND TRADEMARK OFFICE LIST OF ART CITED BY APPLICANT APPLICANT: Yuichi I kubo, et al (Use several sheets if necessary) FILING DATE **GROUP** October 31, 2003 1621 U.S. PATENT DOCUMENTS Subclass Examiner's Document Date Name Class Filing Dale Initials Number Il Appropriate AA 4,851,595 07/1989 Gumprecht Afr 4,876,405 10/1989 Gervasutti ۸C 4,937,398 06/1990 Tung, et al AD. 4,945.119 07/1990 Smits, et al ΑE 4.954.271 09/1990 Green AF 5,040,609 08/1991 Dougherty, et al 01/1992 5,084,190 Fernandez АН 5.115,868 05/1992 Dougherty Jr., et al 08/1992 5,141,654 Femandez Ł 5,523,501 06/1996 Kellner, et al. 10/1996 5,562,861 Nimitz, et al. AL 03/1998 5,730,894 Minor 6,065,547 05/2000 Ellis, et al. ΔN 6,291,729 09/2001 Rao 6,346,203 B1 02/2002 Robin, et al. AP 6,461,530 10/2002 Robin, et al. 40 6,478.979 11/2002 Rivers, et al. AR 6,763,894 07/2004 Schoenrock **SA** 6,849,194 02/2005 Robin, et al. AT 5,416,246 05/1995 Krespan et al. **EXAMINER** DATE CONSIDERED *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Oraw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

2000.

Sheet 3 of 7

Ø 006/010

MAY 25 2006

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT (Use several sheets if necessary) APPLICANT: Yuichi likubo, et al FILING DATE GROUP October 31, 2003 1621 FOREIGN PATENT DOCUMENTS Document Number Subclass Country Translation Yes No AA CA 902590A 08/1962 Canada AΒ EP 0 039 471 A1 11/1981 Europe EP 0 253 410 01/1998 **EPO** 40 EP 0 383 443 A2 08/1990 Europe ΑE EP 0 434 409 A 06/1991 Europe AF. EP 0 481 618 A1 04/1992 Europe EP 0 570 367 B1 01/1993 Europe AH RU 2068718 C1 09/1990 Aussia A) 1,546,505 09/1970 Germany AJ WO 91/02564 03/1991 WIPO WO 91/04766 04/1991 PCT Æ WO 91/12853 09/1991 PCT WQ 93/24586 12/1993 PCT WO 98/37043 08/1998 PCT AO WO 96/40834 12/1996 PCT AP WO 03/029173 04/2003 PCT AO 698,386 10/1953 UK AR GB 1,132,636 11/1968 UK AS, JP 51034595 09/1974 Japan AT JP 57-93070-A 06/1982 Japan Laid Open Hei 1-05/1989 Japan 115999 AV **EXAMINER** DATE CONSIDERED "EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through c ation if not in conformance and not considered. Include copy of this form with next communication to applicant.

2007/010

Sheet 4 of 7

MAY 25 2006

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY, DOCKE PC3-059	T NO.	SERIAL NO. 10/699,491	
		LIST OF ART CITED (Use several sheets	BY APPLICAN If necessary)	ιτ	APPLICANT: Yulchi li		ubo, et al	
					FILING DATE October 31, 20	03	GROUP 1621	
FOREIGN	FOREIGN PATENT DOCUMENTS, CON'T.							
	**	Sho 50-50864 (Laid Open Sho 51-131100)	04/1975	Јарап				
	Ats	Sho 48-19093	03/1973	Japan				
	AL	Sho 52-25679	07/1977	Japan			_	
	ΑĎ	Lai Open Hei 4- 96770	03/1992	Jepan				
	AE							
	AF							
	AQ.							
	Ali							
	A							
	AJ .		_					
	AK				<u>-</u>			
	AL.							
	AM							
	AN							
	AO							
	АР							
	AQ.				,			
	AR							
	BA							
	AT							
	ΑU			~				
	AAV							
EXAMINER		DATE CONSIDER	RED CONTRACT					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw the through of ation it not in conformance and not considered. Include copy of this form with next communication to applicant.								

MAY 25 2006

Sheet 5 of 7

Ø 008/010

Form PTO-1449 ATTY. DOCKET NO. U.S. DEPARTMENT OF COMMERCE SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699.491 LIST OF ART CITED BY APPLICANT APPLICANT: Yuichi likubo, et al (Use several sheets if necessary) FILING DATE **GROUP** October 31, 2003 1621 OTHER REFERENCES (including Author, Title, Date, Perlinent Pages, Etc.) McFarland, Mack, "Chlorofluorocarbons and ozone", 1989, Environ. Sci. Technol., Vo. 23, No. 10, pp. 1203-1207 Malcomb, J.E., "Report 1177 Interim Report Vaporizing Fire Extinguishing Agents", August 1950. Engineer Research ΑВ and Development Laboratories, Petroleum and Distribution Branch, pp. i-90 Wuebbles, Donald J., "The Relative Efficiency of a Number of Halocarbons for Destroying Stratospheric Ozone", January 1981, Lawrence Livermore National Laboratory, University of California, pp. --11 AC Wuebbles, Donald J., "Chlorocarbon Emission Scenarios: Potential Impact on Strato: pheric Ozone", February 1983, هد Journal of Geophysical Research, Vol. 88, No. C2, pp. 1433-1443 Molina, et al.. "Ultraviolet Absorption Cross Sections of Several Brominated Methanes and Ethanes of Atmospheric AF Interest*, February 1982, J. Phys. Chem., 1982, 86, 2672-2676 The United Nations Environment Program. Montreal Protocol Assessment, Technology Review. "Report of the Æ Halons Technical Options Committee", June 1989, Draft for Peer Review Larsen, Eric R., "Halogenated Fire Extinguishants: Flame Suppression by a Physical Mechanism?", 1975, Halogens AG Research Laboratory, The Dow Chemical Corporation, Midland, Michigan, pp. 376-402 Belles, Frank E., "Chemical Action of Halogenated Agents in Fire Extinguishing", 1955, National Advisory Committee АH for Aeronautices, Technical Note 3565, pp. 1-30 Kauschka, Von Gunther, et al., "Calculation of thermodynamic substance data and retiction balance with poly- and perhalogen hydrocarbons". October 1976, Chemistry Section of the Humboldt University in Berlin, Vol. 10, pp. 1-22 (translated) Moore, Jeanne P., et al., "Halon Alternatives Extinguishment Testing", 1989, Center ft r Technologies to Protect Az Stratospheric Ozone, New Mexico Engineering Institute, University of New Mexico, Al-uquerque, New Mexico, presented at the International Conference on CFC & Halon Alternatives, October 10-11, 1989, Washington, D.C., pp. Smart, B.E., "Fluorocarbons", 1983, The Chemistry of Functional Groups, Supplement D, Chapter 14, pp. 603-655 Chemical Encyclopedia, "Bolshaya Rossiiskaya Entslklopedia" Moscow, 1992, Scienti ic Publishing House, Vol. 3, AL Med-Pot The United Nations Environment Program, Montreal Protocol Assessment. Technolog / Review, "Final Report of the АМ Halons - Technical Options Committee", August 1989 Reid, Robert C., "The properties of gases and liquids", 1987, pp. 153-157 ΔN "Part IV The Evolution of the Montreal Protocol", 1987, Section 4.1 and 4.2, pp. 265-2-5 ΑÒ Hynes, Robert G., et al., "Shock-Tube Study of the Pyrolysis of the Halon Replacement Molecule CF₀CHFCF₀", 1999, AP J. Phys. Chem. A, Vol. 103, pp. 54-61 Joint Assessment of Commodity Chemicals No. 24, Pentafluoroethane (HFC 125), (ECETOC) May 1994, pp. 14-20 AΩ Kubota, Kazuo, "Current State and Measures Related to Chlorofluorocarbon Regulatic ns, Part I", 1989, Valgua Review, Vol. 33, No. 2, pp. 1-8 (English translation - pp. 1-18) Malcolm, J.E., "Halogenated Extinguishing Agents", Part II Research at the Corps of Engineers' Laboratories, 1951. ۸S NFPA Quarterly, pp. 119-131 Nelson, Thomas P., "Findings of the Chlorofluorocarbon Chemical Substitutes International Committee", April 1988, AT U.S. Environmental Protection Agency, Air and Energy Engineering Research Labora: 21y. EPA/600/9-88/009, pp. i-Smart, Bruce E., Fluorinated Organic Molecules, 1986, Molecular Structure and Energetics, Vol. 3, pp. 141, 152 ΑU Tominaga, Takeshi, "Global and Technical Countermeasures Against Flon", 1989, The Nikkan Kogyo Shinbun, Ltd., pp. 134-137, 156-163, 170-174 (English translation) EXAMINER DATE CONSIDERED *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

2009/010

Sneet 6 of 7

MAY 25 2006

Form PTO-1449						
10111111011440	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY, DOCKET NO. PC3-059	SERIAL NO. 10/699,491			
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Yulchi I kubo, et al				
		FILING DATE October 31, 2003	GROUP 1621			
OTHER REFERE	NCES (including Author, Tille, Date, Pertinent Pages, Etc.)					
AA	Index to Decisions and Annexes of the Parties to the Montre	al Protocol, Helsinki Mee	ng, p. 79, 128, 241, 1989.			
AB	AB Marshal Sittig, Chemical Process Monograph No. 22, Fluorinated Hydrocarbons and I 'olymers, 1966, page 13					
AC	McLinden, Ph.D, Didion, Ph.D, "Quest for Alternatives", Ashr	den, Ph.D, Didion, Ph.D, "Quest for Allernatives", Ashrae Journal, December 1987, pgs. 69-78.				
AD	ems" pps. 2001-1 and 2001-1					
AJ2	Creitz, Journal of Research of the National Bureau of Standa	ard, Vol. 65A, No. 4, pp. 3	39-396 (1961).			
AF	AF Simons, Fire Extinguishing Agents, in H.G. Bryce, Industrial Aspects of Fluorine Chemistry, at pages 354-358, \ of Hudlicky, Milos, Chemistry of Organic Fluorine Compounds (1962).					
AG	R. Hirst and K. Booth, Measurement of Flame-Extinguishing (1977).	Concentrations, Fire Tec	Inalogy, Vol. 13(4): 296-315			
М	Conducted by Purdue Research Foundation and the Departs	eport on Extinguishing Agents for the Period September 1, 1947 to June 30, 1950 Covering Research led by Purdue Research Foundation and the Department of Chemistry. Purdue University. Contract W-44- pr 507. Army Englneers Research and Development Laboratories, Fort Belvoir				
IA.	Research at the Corps of Engineers Laboratories, Halogena (October, 1951).	ted Extinguishing Agents,	NFPA Quarterly pgs. 118-131			
Decision of the Technical Board of Appeal Regarding European Patent No. 0439579, Novembe			November 14, 2001.			
AK	Banks, Findings of the Chlorofluorocarbon Chemical Substit Report A-1-A-5, 05/1987.	arbon Chemical Substitutes International Commi				
Hogue, Cheryl, "Substitutes for Halons: No One Chemical St. 493-495.		uitable", Intl. Environment	Reporter, Nov. 21, 1990, pp.			
سم	Federal Register Vol. 58, No. 90, May 12, 1993, pp. 28136-2	8149 and 28176-28185.				
4N "FM-2000, The New Solution for Fire Protection", June,		3, 11 pages.				
мо	Moore, P.E., "Fluorocarbon Halon Alternatives", Fire Safety (Engineering, 1997, 3 page	· S.			
АР	Hampson, Roger D., "The Success of FM-200®", Fire Safety	Engineering, Vol. 2, No.	, 1995, pgs. 21-23.			
"Kiddie FM-200® Fire Suppression Systems", May 1994, 2 pages						
AR.	"Real-Scale Halon Replacement Testing," CFC/Halon News, March 1996, one page					
AS	FM-200° Waterless Fire Protection for Marine Applications."	2003, 8 pages				
EXAMINER	DATE CONSIDERED	-				

RECEIVED WELLS ST JOHN PS CENTRAL FAX CENTER

MAY 25 2006

Ø 010/010

Sheet 7 of 7

Form PTO-1449			U.Ş. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY, DOCKET NO. PC3-059	SERIAL NO. 10/699,491			
LIST		ĻI\$'	TOF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLIÇANT: Yulqhi I kul	bo, et al			
				FILING DATE October 31, 2003	GROUP 1621			
OTHER RE	OTHER REFERENCES, CONT. (including Author, Title, Date, Perlinent Pages, Etc.)							
	M		dand, Robert E., "When It Comes to Fire Protection - Spe page	ed Counts, Automotive no	dustry Agenda, March 2002,			
	AB	Mike Bennett, "Halon Replacement for Aviation Systems," International CFC and Halon Alternatives Conference, September 29 through October 1, 1992, Washington, D.C., pages 667-672						
	AC.	Thornton, Al, "FM-200, A Unique Fire Fighting Agent," 1997 Talpei International Conference on Ozone Layer Protection, December 10, 1997, 10 pages						
	Α0.	The	The Appeal Decision in invalidation action for Patent No. 2580075, 10 pages (translation)					
	AE	International Fire Protection, "Great Lakes Chemical Corporation - Company Profile," An MDM Publication, Issue 4, Nov/Dec 2000, 4 pages						
	AF	http://www.e1.grcatlakes.com/wfp/product/jsp/articles.jsp "Airports and Satellite Install Itions Protected by FM-2009," "Healthcare Facilities Protected by FM-2009 Waterless Fire Protection Systems," "Mu: eums and Cultural Landmarks protected by FM-2009," and "Casino Properties Protected by FM-2009."						
	AG	Nimitz , et al., "Halocarbons as Halon-Replacements: Technology Review and Initiation," New Mexico Engineering Research Institute, University of New Mexico, Final Report, March 1991. 141 pages						
	AH	"A Review of the Toxic and Asphyxiating Hazards of Clean Agent Replacements for H tion 1301," A Report by the Halon Alternatives Group, February 1995, 22 pages						
	^	Hart-Winchester, "A Burning Issue: What Products Will Replace Halon 1301?" The Computer Operations Manager, March/April 1995, pages 13-18						
	A.J	Maranghides, et al., "Discharge System Modifications: Real Scale Haton 1301 Replacement Testing," Haton Options Technical Working Conference, Albuquerque, New Mexico, May 7-9, 1995, 12 pages						
	AK	Ellis, "Pleasure Boat Fire Extinguisher Choices," Burgee 26, November 1996						
	AL	"Scientific Assessment of Stratospheric Ozone: 1989", sponsored by the United Natio is Environmental Program						
	AM	Nat'l Fire Protection Assoc., Boston, "Fire Protection Handbook" 14th ed., 2001, Sec 1 3/Chap 4, pp. 13-20 to 13-26						
	AN	Fuka	es and 2000, pp. 143-146					
	AO .	Burns+, "Flourine Compounds in Anaesthesia" 1982, Vol. 37, pp. 278-284						
	ДР							
	40							
	45				- v			
	A5							
EXAMINER DATE CONSIDERED								
*EXAMINER: Initial if reference considered, whether or not cltation is in conformance with MPEP 609; Draw line through ci ation if not in conformance and not considered. Include copy of this form with next communication to applicant.								